What is claimed is:

1. An integrated circuit comprising a thermal sensor, an A-D converter coupled to the thermal sensor, wherein the thermal sensor provides an input to the A-D converter, and the A-D converter converts the input to a digital value representative of the thermal environment of the thermal sensor.

2. An integrated circuit as claimed in claim 1 wherein the thermal sensor comprises at least one diode.

3. An integrated circuit as claimed in claim 2 wherein the thermal sensor comprises a plurality of diodes wherein each diode in the plurality is coupled in series.

4. An integrated circuit as claimed in claim 3 wherein the plurality of diodes comprises three diodes.

5. An integrated circuit as claimed in claim 1 further comprising a plurality of thermal sensors and select logic circuitry for selectively coupling the plurality of thermal sensors to the A-D converter.

6. An integrated circuit as claimed in claim 5 wherein the plurality of thermal sensors are positioned on the integrated circuit in accordance to at lease one predetermined criteria.

7. An integrated circuit as claimed 6 wherein a predetermined criteria is sensitivity to thermal resistance.

8. An integrated circuit as claimed in claim 1 further comprising a processor and power management circuitry electrically coupled to the A-D converter, the processor for receiving the data value from the A-D converter, and providing feedback from the processor to the power management circuitry.

9. An integrated circuit as claimed in claim 8 further comprising storage circuitry coupled between the A-D converter and the processor for storing the digital value.

10. An integrated circuit as claimed in claim 8 further comprising communication circuitry coupled to the A-D converter for communicating the digital value to the processor.

11. A method for managing an integrated circuit comprising the steps of:

collecting a data value at a location on an integrated circuit wherein the data value has a predetermined functional relationship to the temperature at the location; and

converting the data value to a value representative of the thermal environment of the location on the integrated circuit.

12. A method for managing an integrated circuit, as claimed in claim 11 further comprising the step of comparing the data value to a known predetermined value to determine problems associated with the integrated circuit.

13. A method as claimed in claim 11 wherein said collecting step comprises monitoring a thermal sensor for providing the data value that is representative of the temperature at the location.

14. A method for an integrated circuit, as claimed in claim 11 further comprising the step of providing the data value to a processor to provide feedback to the integrated circuit wherein the purpose of the feedback is to change a parameter of the integrated system in a predetermined manner.

15. A method as claimed in claim 14 further comprising the step of adjusting the power supplied to a section of the integrated circuit at the location in a predetermined manner in response to the feedback.

16. A method as claimed in claim 14 further comprising the step of adjusting the temperature at the location on the integrated circuit in a predetermined manner in response to the feedback.

17. A method as claimed in claim 12 further comprising the step of determining the location of a defect in the integrated circuit at the location from comparing the data value to a known predetermined value.